## CLAIMS

**We claim:**

1. A method for establishing a secure conduit for SMS communication with a wireless terminal, comprising:

a) encrypting an authorization key in response to a first SMS message from the wireless terminal comprising a public key and a request for the authorization key;

b) sending to the wireless terminal a second SMS message comprising the encrypted authorization key;

c) decrypting a third SMS message from the wireless terminal comprising an authentication code and a request for a traffic key;

d) authenticating the third SMS message;

e) encrypting the traffic key; and

f) sending to the wireless terminal a fourth SMS message comprising the traffic key.

2. The method of claim 1, further comprising:

generating at least three keys, comprising a key encryption key, an upstream message authentication key, and a downstream authentication key.

3. The method of claim 1, wherein the wireless terminal is a wireless telephone.

4. The method of claim 1, wherein the authentication code is a hash-based message authentication code digest.

5. The method of claim 1, wherein the secure conduit is for conveying credit card transactions.

6. The method of claim 1, wherein the secure conduit is for conveying medical information.

7. An apparatus for establishing a secure conduit for SMS communication with a wireless terminal, comprising:

a) first cryptographic means for encrypting an authorization key in response to a first SMS message from the wireless terminal comprising a public key and a request for the authorization key;

b) communication means for sending to the wireless terminal a second SMS message comprising the encrypted authorization key;

c) second cryptographic means for decrypting a third SMS message from the wireless terminal comprising an authentication code and a request for a traffic key;

d) upstream message authentication key means for authenticating the third SMS message; and

e) third cryptographic means for encrypting the traffic key;

wherein the communication means is also means for sending to the wireless terminal a fourth SMS message comprising the traffic key.

8. The apparatus of claim 7, further comprising:

fourth cryptographic means for generating at least three keys, comprising a key encryption key, an upstream message authentication key, and a downstream authentication key.

9. The apparatus of claim 7, wherein the wireless terminal is a wireless telephone.

10. The apparatus of claim 7, wherein the authentication code is a hash-based message authentication code digest.

11. The apparatus of claim 7, wherein the secure conduit is for conveying credit card transactions.

12. The apparatus of claim 7, wherein the secure conduit is for conveying medical information.

13. A computer-readable medium having stored thereon a plurality of instructions, the plurality of instructions including instructions which, when executed by a processor, cause the processor to establish a secure conduit for SMS communication with a wireless terminal, by:

a) encrypting an authorization key in response to a first SMS message from the wireless terminal comprising a public key and a request for the authorization key;

b) creating a second message comprising the encrypted authorization key;

c) decrypting a third SMS message from the wireless terminal comprising an authentication code and a request for a traffic key;

d) authenticating the third SMS message;

e) encrypting the traffic key; and

f) creating a fourth message comprising the traffic key.

14. The computer-readable medium of claim 13, wherein the plurality of instructions includes further instructions which, when executed by a processor, cause the processor to perform the additional step of:

generating at least three keys, comprising a key encryption key, an upstream message authentication key, and a downstream authentication key.

15. The computer-readable medium of claim 13, wherein the wireless terminal is a wireless telephone.

16. The computer-readable medium of claim 13, wherein the authentication code is a hash-based message authentication code digest.

17. The computer-readable medium of claim 13, wherein the secure conduit is for conveying credit card transactions.

18. The computer-readable medium of claim 13, wherein the secure conduit is for conveying medical information.